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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/520,004

12/29/2004

Raymond Hallot

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7014

27799

7590

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EXAMINER

HOOK, JAMES F

ART UNIT

PAPER NUMBER

3754

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/520,004	Applicant(s) HALLOT ET AL.	
	Examiner James F. Hook	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-33 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 9, 15-23, 25, 26 and 28-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 8, 10-14, 24 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

Claims 1, 2, 6, 10, 11, 13, 14, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baylot (WO 00/40886) in view of Nelson and Thiebaud. The reference o Baylot discloses the recited device for thermally insulating at least one undersea pipe comprising a thermally insulating covering 4 made of a phase change material including an alkane material combined with wax provided around pipes 1, a second insulating layer 2 also provided around the pipes 1 between the pipes and the outer leak proof case, an outer leak proof case 3₁ as seen in figure 15 to be rectangular in shape and thus meeting the limitations of claim 24 and 27, and where the pipe is surrounded in a continuous manner, where the phase change material meets all of the requirements of claims 10 and 13. The reference to Baylot discloses all of the recited structure with the exception of providing a container around the insulation layer within the outer protective case and spacing the insulation shells so they do not contact the inner pipes but are close thereto. The reference to Nelson discloses that it is old and well known in the art of insulated pipes to provide an insulation, a leak proof protective case 270 surrounding a pipe 256a, where the insulation can be separated by flexible containers 270 to protect the insulation where the casing is prefabricated and the insulation is provided therein to protect the insulation, especially when such is provided as a liquid or loose material insulation. It would have been obvious to one skilled in the art to modify the insulation in Baylot by providing coating layers to act as flexible

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containers for the insulation layers as suggested by Nelson where such teaches the equivalence of using prefabricated containers for surrounding and protecting insulation especially when such is a liquid form or loose material where there are added beneficial qualities that are provided by the container where one skilled in the art would find it obvious to provide a layer if desired as Nelson suggests to protect the insulation from damage thereby saving money in replacement costs. The reference to Thiebaud discloses that it is old and well known to form insulation into half shells 4_1 and 4_2 around pipes 2,3 inside of an outer shell 1, where space 5,6 is left between the half shells and the walls of both the inner pipes and the outer shell to create a pathway around the insulation shells to equalize pressure for subsea pipes. It would have been obvious to one skilled in the art to modify the subsea pipe of Baylot by providing a small space between the insulation shells and the inner pipe as suggested by Thiebaud to allow for equalization of pressure within the pipe in a subsea environment thereby preventing failure of the pipes.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baylot (WO 00/40886) in view of Nelson and Thiebaud as applied to claims 1, 2, 6, 10, 11, 13, 14, 24, and 27 above, and further in view of Ohn (438). The reference to Baylot as modified discloses all of the recited structure with the exception of specifically using the phase change material inside of the second insulation. The reference to Ohn discloses that it is old and well known in the art to provide a pipe 12 with an insulation material including an inner phase change insulation layer 22, and a second outer insulation layer 24 of conventional insulation, where a outer case 14 is provided. It would have been

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obvious to one skilled in the art to modify the insulation layers in Baylot as modified such that the phase change material was located inside of the second insulation material as suggested by Ohrn where such is an alternate form of providing insulation to a pipe in subsea applications, where the outer insulation layer helps retain and protect the phase change material thereby insuring better temperature control of the inner pipe.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baylot (WO 00/40886) in view of Nelson and Thiebaud as applied to claims 1, 2, 6, 10, 11, 13, 14, 24, and 27 above, and further in view of Davis. The reference to Baylot as modified discloses all of the recited structure with the exception of disclosing the use of heptacosane as the phase change material. The reference to Davis discloses that it is old and well known in the art of phase change materials to use heptacosane as a known phase change insulating material. It would have been obvious to one skilled in the art to modify the phase change material in Baylot as modified to be of any equivalent form of phase change material including heptacosane as suggested by Davis which teaches this is an old and well known phase change material used in insulation layers and would provide an alternate material having different properties than the alkane used in Sigmund as modified.

Response to Arguments

Applicant's arguments with respect to claims 1, 2, 6, 8, 10-14, 24, and 27 have been considered but are moot in view of the new ground(s) of rejection.

It is also noted that applicant appears to be reading the Nelson reference incorrectly at column 20, line 40, such appears to be stating that the walls of the container including the insulation therein are thick walled, rather than the wall that makes up the container is thick, since it would appear that the walls are in fact thin, but does go on to talk about the hinge being flexible and since the walls appear to be as thin as the hinge portion it is believed there is some flexibility to the shell as well, and therefore any argument that the phase change material could not properly work therein is not persuasive especially when if the container were not completely filled with phase change material it would have the space to expand no matter how flexible the walls are.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references to Mayer and Buff disclosing a state of the art prefabricated containers for insulation.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James F. Hook/
Primary Examiner, Art Unit 3754

JFH